Remarks

The Office Action mailed April 5, 2007 has been carefully reviewed and the foregoing remarks have been made in consequence thereof.

Claims 1-22 are now pending in this application. Claims 1-22 stand rejected.

The rejection of Claims 1-22 under 35 U.S.C. § 102(b) as being anticipated by Spriggs et al. (U.S. Patent 6,421,571) (hereinafter referred to as "Spriggs") is respectfully traversed.

Spriggs describes an industrial plant asset management system (10). The system (10) includes configuration tools that are used to configure all data acquisition devices including instrumentation, construct machine train diagrams, and define the enterprise. The system (10) also includes a data acquisition module (DAM) (20) that is configured to collect signals from a plurality of plant assets. Specifically, the DAM (20) uses a plurality of sensors (70) that are coupled to a corresponding plurality of plant assets in order to collect data from each plant asset. Each sensor (70) collects independent data, or data points, such as vibration, temperature, pressure, torque, position, and flow. The collected data points are then sent to a data acquisition core (DAC) (22) where they are processed by performing alarming settings on the collected data points and determining the severity level of any alarms that a single data point may have.

The system (10) also includes an enterprise tree object (112) that includes a graphical user interface (GUI) (102), which may be run on a computer. The enterprise tree object (112) visually shows an alarm status of the total alarms set for the system (10). A user may navigate the GUI (102) to identify a specific alarm with a specific severity level. The user may then use the GUI (102) to "drill-down" to the alarming event by following a color-coded severity level path. As a result, the user may determine the cause of the alarm by navigating the enterprise tree object (112).

In the event of an alarm, the system (10) logs the alarm event in an event list (85). The event list (85) may be configured to initiate other user-defined actions that may

correspond with a specific event, such as send an email to an operator when a certain event occurs. Notably, Spriggs does not describe nor suggest an integrated monitoring and control system including a plurality of sensors operatively coupled to equipment combinations that include a driver machine and a driven machine. Moreover, Spriggs does not describe nor suggest a derived quantity layer that is configured to receive the measured process parameters, and compute values for the process parameters using the measured process parameters. In addition, Spriggs does not describe nor suggest a rule set layer comprising at least one rule associated with at least some of a plurality of equipment combinations for determining a health of the equipment combination, or a recommendation layer for correlating the health of the equipment combination to at least one of a mitigating procedure, a maintaining procedure, and an operation procedure.

Claim 1 recites a method for operating a facility having a plurality of equipment combinations, each equipment combination is operable interactively with at least one other equipment combination, wherein the method comprising "receiving a plurality of measured process parameters, in real-time, for each of the plurality of equipment combinations, wherein the equipment combinations include at least a driver machine and a driven machine . . . determining at least one derived quantity from the plurality of measured process parameters . . . recommending a change to an equipment operation based on the measured process parameters and the derived quantities."

Spriggs does not describe nor suggest a method for operating a facility having a plurality of equipment combinations, as is recited in Claim 1. Specifically, Spriggs does not describe nor suggest a method for operating a facility, wherein the method includes receiving a plurality of measured process parameters, in real-time, for each equipment combination including at least a driver machine and a driven machine, determining at least one derived quantity from the plurality of measured process parameters, and recommending a change to an equipment operation based on the measured process parameters and the derived quantities. Rather, in contrast to the present invention, Spriggs merely describes a system that merely collects data points from individual sensors coupled to individual plant assets and performs alarming on the collected data points. The system in Spriggs determines whether a data point

or a plurality of data points trigger an alarm and the severity of the alarm. Moreover, the system includes a program that guides a user through a program to identify a cause of the alarm for the plant asset. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Spriggs.

Claims 2-8 depend from independent Claim 1. When the recitations of Claims 2-8 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-8 likewise are patentable over Spriggs.

Claim 9 recites a method of analyzing the health of an equipment combination operating in a system that includes a plurality of other equipment combinations coupled to the equipment combination through conduits, and wherein the equipment combination includes a driver machine and a driven machine coupled in rotational synchronicity, wherein the method comprises "receiving a measured process parameter associated with the driver machine . . . receiving a measured process parameter associated with the driven machine . . . receiving at least one measured process parameter associated with the plurality of other equipment combinations . . . deriving a process parameter quantity for at least one of the measured process parameter associated with the driver machine and the measured process parameter associated with the driven machine using the at least one measured process parameter associated with the plurality of other equipment combinations."

Spriggs does not describe nor suggest a method of analyzing the health of an equipment combination, as is recited in Claim 9. More specifically, Spriggs does not describe nor suggest a method which includes receiving a measured process parameter associated with a driver machine, receiving a measured process parameter associated with a driven machine, receiving at least one measured process parameter associated with a plurality of other equipment combinations, and deriving a process parameter quantity for at least one of the measured process parameter associated with the driver machine and the measured process parameter associated with the driven machine using the at least one measured process parameter associated with the plurality of other equipment combinations. Rather, in contrast to the present invention, Spriggs describes a system that merely collects data points from individual sensors coupled to individual plant assets and performs alarming on the collected

data points. The system in Spriggs determines whether a data point or a plurality of data points trigger an alarm and the severity of the alarm. Accordingly, for at least the reasons set forth above, Claim 9 is submitted to be patentable over Spriggs.

Claims 10 and 11 depend from independent Claim 9. When the recitations of Claims 10 and 11 are considered in combination with the recitations of Claim 9, Applicants submit that dependent Claims 10 and 11 likewise are patentable over Spriggs.

Claim 12 recites an integrated monitoring and control system for a plant wherein the plant has a plurality of equipment combinations that are operable interactively with each other and with individual equipment and wherein the combinations are operable to maintain selected plant operational conditions, said monitoring and control system comprising "a plurality of sensors operatively coupled to the equipment combinations, the plurality of sensors measuring process parameters for monitoring plant operation and assessing equipment combination condition, and providing output signals to said monitoring and control system, wherein each equipment combination includes at least a driver machine and a driven machine . . . a derived quantity layer communicatively coupled to a data bus, said derived quantity layer configured to receive the measured process parameters . . . and compute values for process parameters using the measured process parameters . . . a rule set layer comprising at least one rule associated with at least some of the plurality of equipment combinations for determining a health of the equipment combination . . . and a recommendation layer for correlating the health of the equipment combination to at least one of a mitigating procedure, a maintaining procedure, and an operation procedure."

Spriggs does not describe nor suggest an integrated monitoring and control system for a plant, as is recited in Claim 12. More specifically, Spriggs does not describe nor suggest an integrated monitoring and control system including a plurality of sensors operatively coupled to equipment combinations that each includes at least a driver machine and a driven machine. Moreover, Spriggs does not describe nor suggest a derived quantity layer configured to receive the measured process parameters, and compute values for the process parameters using the measured process parameters. Furthermore, Spriggs does not describe nor suggest a rule set layer comprising at least one rule associated with at least some of a plurality of

equipment combinations for determining a health of the equipment combination, or a recommendation layer for correlating the health of the equipment combination to at least one of a mitigating procedure, a maintaining procedure, and an operation procedure. Rather, in contrast to the present invention, Spriggs describes a system including a plurality of sensors coupled to a plurality of plant assets, wherein the system merely collects data points from individual sensors coupled to individual plant assets and performs alarming on the collected data points. The system in Spriggs determines whether a data point or a plurality of data points trigger an alarm and the severity of the alarm. Moreover, the system includes an alarm event list, wherein a user-defined action may be initiated in the event of a specific alarm being triggered. In addition, the system also includes a program that guides a user through a program to identify a cause of an alarm for a plant asset. Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Spriggs.

Claims 13-19 depend from independent Claim 12. When the recitations of Claims 13-19 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 13-19 likewise are patentable over Spriggs.

Claim 20 recites a computer program embodied on a computer readable medium for monitoring a plant, the plant having a plurality of equipment combinations operating interactively with each other and with individual equipment, the program comprising "a code segment that controls a computer that receives a plurality of process parameters from sensors operatively coupled to the equipment combinations and individual equipment and then . . . derives values for process parameters using the measured process parameters . . . selects a rule from a set of rules comprising a plurality of commands that direct data analysis for each at least one of measured process parameter, a derived quantity, a plurality of measured process parameters and a derived quantities associated with an equipment combination . . . recommends at least one of a mitigating procedure, a maintaining procedure, and an operation procedure."

Spriggs does not describe nor suggests a computer program, as is recited in Claim 20. More specifically, Spriggs does not describe nor suggest a computer program that controls a computer that receives a plurality of process parameters from sensors operatively coupled to

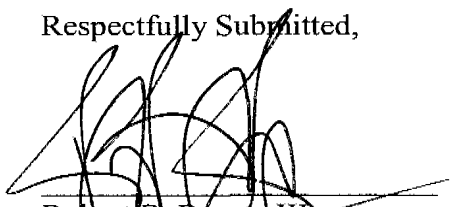
equipment combinations and individual equipment. Moreover, Spriggs does not describe nor suggest a computer program that derives values for process parameters using the measured process parameters. Furthermore, Spriggs does not describe nor suggest a computer program that selects a rule from a set of rules comprising a plurality of commands that direct data analysis for each at least one of measured process parameter, a derived quantity, a plurality of measured process parameters and a derived quantities associated with an equipment combination, and recommends at least one of a mitigating procedure, a maintaining procedure, and an operation procedure. Rather, in contrast to the present invention, Spriggs describes a system that collects data points from individual sensors coupled to individual plant assets and performs alarming on the collected data points. The system in Spriggs determines whether a data point or a plurality of data points trigger an alarm and the severity of the alarm. Moreover, the system in Spriggs includes an alarm event list, wherein a user-defined action may be initiated when a specific alarm is triggered. In addition, the system also includes a program that guides a user through a program to identify a cause of an alarm for a plant asset. Accordingly, for at least the reasons set forth above, Claim 20 is submitted to be patentable over Spriggs.

Claims 21 and 22 depend from independent Claim 20. When the recitations of Claims 21 and 22 are considered in combination with the recitations of Claim 20, Applicants submit that dependent Claims 21 and 22 likewise are patentable over Spriggs.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 1-22 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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